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**UTILITY
PATENT APPLICATION
TRANSMITTAL**

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.

042390.P9219

First Inventor or Application Identifier

Michael S. Chartier

Title MOBILE COMPUTING SYSTEM HAVING A MODEM AND METHOD

Express Mail Label No.

EL034440103US

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents

ADDRESS TO:

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1. ☒ Fee Transmittal Form
(Submit an original, and a duplicate for fee processing)
2. ☒ Specification [Total Pages 15]
(preferred arrangement set forth below)
- Descriptive title of the Invention
 - Cross References to Related Applications
 - Statement Regarding Fed sponsored R & D
 - Reference to Microfiche Appendix
 - Background of the Invention
 - Brief Summary of the Invention
 - Brief Description of the Drawings (if filed)
 - Detailed Description
 - Claim(s)
 - Abstract of the Disclosure
3. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets 1]
4. Oath or Declaration [Total Pages 3]
- a. ☐ Newly executed (original copy)
 - b. ☐ Copy from a prior application (37 C.F.R. § 1.63(d))
(for continuation/divisional with Box 16 completed)
 - i. ☐ **DELETION OF INVENTOR(S)**
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR §§ 1.63(d)(2) and 1.33(b).

*NOTE FOR ITEMS 1 & 13: IN ORDER TO BE ENTITLED TO PAY SMALL ENTITY FEES, A SMALL ENTITY STATEMENT IS REQUIRED (37 C.F.R. § 1.27), EXCEPT IF ONE FILED IN A PRIOR APPLICATION IS RELIED UPON (37 C.F.R. § 1.28).

5. ☐ Microfiche Computer Program (Appendix)
6. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
- a. ☐ Computer Readable Copy
 - b. ☐ Paper Copy (identical to computer copy)
 - c. ☐ Statement verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

7. ☐ Assignment Papers (cover sheet & document(s))
8. ☐ 37 C.F.R. § 3.73(b) Statement ☐ Power of Attorney
(when there is an assignee)
9. ☐ English Translation Document (if applicable)
10. ☐ Information Disclosure Statement (IDS)/PTO - 1449 ☐ Copies of IDS Citations
11. ☐ Preliminary Amendment
12. ☒ Return Receipt Postcard (MPEP 503)
(Should be specifically itemized)
13. ☐ *Small Entity Statement(s) ☐ Statement filed in prior application, Status still proper and desired
14. ☐ Certified Copy of Priority Document(s)
(if foreign priority is claimed)
15. ☐ Other:

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of prior application No:

Prior application Information: Examiner:

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re U.S. Patent Application Of)
 William Kolton)
)
 Application No. Not yet assigned)
)
 Mailed:)
)
 For: Ornamental Table Having A Writing Surface With)
 A Teaching Insert)

VERIFIED STATEMENT CLAIMING SMALL ENTITY STATUS
(37 C.F.R. §§ 1.9(f) and 1.27(b)) - INDEPENDENT INVENTOR

As a below named inventor, I hereby declare that I qualify as an independent inventor, as defined in 37 C.F.R. § 1.9(c), for purposes of paying reduced fees under Sections 41(a) and (b) of Title 35, United States Code, to the Patent and Trademark Office, with regard to the invention entitled "Ornamental Table Having A Writing Surface With A Teaching Insert" described in the Specification filed herewith.

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this Verified Statement is directed.

Signature of Inventor: 
Name of Inventor: William Kolton
Date: 8/23/00

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APPLICATION FOR UNITED STATES LETTERS PATENT

FOR

MOBILE COMPUTING SYSTEM HAVING A MODEM AND METHOD THEREFOR

Inventor(s): Michael S. Chartier

Prepared by: Kenneth M. Seddon,
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MOBILE COMPUTING SYSTEM HAVING A MODEM AND METHOD THEREFOR

BACKGROUND

The use of batteries to power portable computing devices (e.g., laptop computers, palmtop computers, personal digital assistants (PDA's), etc.) typically offer users the flexibility of operating the devices where ever the user desires. However, the current state of battery technology is not capable of providing an indefinite supply of power to the devices. This is due, at least in part, to the amount of power that may be consumed by some of the components of a portable computing device. Components such as the display, processor, and hard disk drive are typically responsible for a large portion of the power used by mobile devices.

Consequently, many portable computing devices have a stand-by or idle mode that attempts to reduce the amount of power that is consumed when the device is not actively being used by the user. However, these low-power modes attempt to deactivate many, if not all, of the components in the portable computing device. For example, the PC98 Design Guide proposed by Intel Corporation and Microsoft Corporation calls for power to be removed from the main processor when the computing device is turned off. In addition, when power to the main processor is removed, power is also removed from any of the components in a portable computing device that share the same power source.

Consequently, the other components of the portable computing device may not be used. This generally prohibits any wireless or wired communication with other components or a network when the main processor is disabled. Thus, there is a continuing need for better ways to improve the operation of portable communication

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devices.

BRIEF DESCRIPTION OF THE DRAWING

The subject matter regarded as the invention is particularly pointed out and
5 distinctly claimed in the concluding portion of the specification. The invention, however,
both as to organization and method of operation, together with objects, features, and
advantages thereof, may best be understood by reference to the following detailed
description when read with the accompanying drawing in which:

the sole figure is a block diagram representation of an embodiment of a system
10 having a modem in accordance with the present invention.

DETAILED DESCRIPTION

In the following detailed description, numerous specific details are set forth in order
to provide a thorough understanding of the invention. However, it will be understood by
15 those skilled in the art that the present invention may be practiced without these specific
details. In other instances, well-known methods, procedures, components and circuits
have not been described in detail so as not to obscure the present invention.

An algorithm or program is here, and generally, considered to be a self-consistent
sequence of acts or operations leading to a desired result. These include physical
20 manipulations of physical quantities. Usually, though not necessarily, these quantities
take the form of electrical or magnetic signals capable of being stored, transferred,
combined, compared, and otherwise manipulated. It has proven convenient at times,

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principally for reasons of common usage, to refer to these signals as bits, values, elements, symbols, characters, terms, numbers or the like. It should be understood, however, that all of these and similar terms are to be associated with the appropriate physical quantities and are merely convenient labels applied to these quantities.

5 Unless specifically stated otherwise, as apparent from the following discussions, it is appreciated that throughout the specification discussions utilizing terms such as "processing," "computing," "calculating," "determining," or the like, refer to the action and/or processes of a computer or computing system, or similar electronic computing device, that manipulate and/or transform data represented as physical, such as electronic,
10 quantities within the computing system's registers and/or memories into other data similarly represented as physical quantities within the computing system's memories, registers or other such information storage, transmission or display devices.

Embodiments of the present invention may include apparatuses for performing the operations herein. This apparatus may be specially constructed for the desired purposes, or it may comprise a general purpose computing device selectively activated or
15 reconfigured by a program stored in the device. Such a program may be stored on a storage medium, such as, but is not limited to, any type of disk including floppy disks, optical disks, CD-ROMs, magnetic-optical disks, read-only memories (ROMs), random access memories (RAMs), electrically programmable read-only memories (EPROMs),
20 electrically erasable and programmable read only memories (EEPROMs), magnetic or optical cards, or any other type of media suitable for storing electronic instructions, and capable of being coupled to a system bus for a computing device.

The processes and displays presented herein are not inherently related to any
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particular computing device or other apparatus. Various general purpose systems may be used with programs in accordance with the teachings herein, or it may prove convenient to construct a more specialized apparatus to perform the desired method. The desired structure for a variety of these systems will appear from the description below. In addition, embodiments of the present invention are not described with reference to any particular programming language. It will be appreciated that a variety of programming languages may be used to implement the teachings of the invention as described herein. In the following description and claims, the terms "coupled" and "connected," along with their derivatives, may be used. It should be understood that these terms are not intended as synonyms for each other. Rather, in particular embodiments, "connected" may be used to indicate that two or more elements are in direct physical or electrical contact with each other. "Coupled" may also mean that two or more elements are in direct physical or electrical contact. However, "coupled" may also mean that two or more elements are not in direct contact with each other, but yet still co-operate or interact with each other.

Turning to the figure, an embodiment 100 in accordance with the present invention is described. Embodiment 100 may comprise a portable computing device 10 that may comprise, for example, a laptop computer, a palmtop computer, a PDA, or the like. However, it should be understood that only a portion of portable computing device 10 is included in the figure and that the scope of the present invention is not limited to these examples.

Portable computing device 10 may comprise a main processor 50, such as a Pentium III processor™ from Intel Corporation, Santa Clara, California, that may be used to execute programs for a user. For example, main processor 50 may execute application programs as desired by the user or execute operating software used to control the

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components within or external to portable computing device 10. Portable computing device 10 may optionally comprise a display 20 to provide the user with requested information. It should also be understood that portable communication device 10 may comprise other components such as a disk drive, Input/Output (IO) devices, and the like, although the scope of the present invention is not limited in this respect.

Portable computing device 10 may also comprise a modem 70 that may be used to receive or transmit data while main processor 50 is deactivated. As explained in more detail below, modem 70 may be programmed to download or transmit information when main processor 50 is in an idle mode or is turned off altogether. For example, a user may program modem 70 to download data, such as email, stock data, news articles, etc, while portable computing device is otherwise inactive. Thus, modem 70 may be used to retrieve communications from a network while main processor 50 is inactive or even powered off.

In this particular embodiment, modem 70 uses a wireless system to receive and transmit communication from a network, although the scope of the present invention is not limited in this respect. In alternative embodiments, modem 70 may use a wired connection, such as a phone line, network cable, etc., to receive or transmit communications with a network.

In a wireless embodiment, modem 70 may comprise an antennae 76 and a receive/transmitter unit 72 to broadcast and receive radio frequency (RF) communications. It should be understood, however, that the scope of the present invention is not limited by the particular frequency used to communicate portable computing device 10. Modem 70 may also optionally comprise an A/D, D/A converter 73 and a digital signal processor

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(DSP) 74 that may be used to process base band or intermediate frequency (IF) signals.

Modem 70 may also comprise other components, such as filters, decoders, multipliers, etc., (not shown) that may be used to process a received communication or to transmit a communication.

5 Modem 79 may also comprise a modem processor 71 that may be programmed to store messages in memory 75. Although the scope of the present invention is not limited in this respect, memory 75 may comprise non-volatile memory, such as flash memory, EEPROM's, etc., and/or volatile memory such as SRAM. Among other things, memory 75 may be used to store the instructions to be executed by modem processor 71 when main processor 50 is inactive. Memory 75 may also comprises a variety of different types of memory that have different power consumption characteristics. For example, memory 75 may comprise flash memory and static random access memory (SRAM). In some embodiments, the SRAM memory may be used as temporary storage until it is appropriate to transfer the data from the SRAM memory to the flash memory.

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20 Memory 75 may also be used to store user profile information, such as user account information to be used to connect to a network. In addition, memory 75 may be used to store data indicating what information is to be retrieved or transmitted by modem 75 and stored in memory 75. For example, memory 75 may programmed by a user to identify which emails are to be downloaded or transmitted, what data is to be downloaded from the network (e.g., the names of files), or what data is to be downloaded from the internet (e.g., stock data), although the scope of the present invention is not limited in this respect.

In accordance with a particular embodiment of the present invention, a user may
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program modem 70 with the user profile data using main processor 50. Alternatively, the user profile data may be downloaded from a network using modem 70. When portable computing device 10 is not actively being used by a user (e.g., main processor 50 is inactive or powered off), modem processor 70 may execute instructions so that modem 5 70 establishes communication with a network. Thus, modem processor 71 may operate independently from main processor 50. For example, modem 70 may be used to connect to a network when portable computing device 10 is recharging or otherwise inactive. In particular embodiments, this may be desirable to reduce the amount of power that is consumed by portable computing device 10. Alternatively, in some embodiments it may be desirable to completely remove all power to main processor 50 so that main processor 50 consumes substantially no current or power.

Once a connection has been established, modem processor 71 may download communications and store them in memory 75. Modem processor 71 may also generate the appropriate control signals so that modem 70 transmits messages from memory 75. 15 Thus, modem 70 may be used to share data with a network even though the main processor (e.g., main processor 50) of portable computing device is inactive. Although the scope of the present invention is not limited in this respect, modem 70 may be used to receive or transmit communications when power is removed from main processor 50. Alternatively, the user may program modem 70 to identify when modem 70 is to receive 20 or transmit data. This may be desirable so that the user may connect to a network during periods of reduced traffic or networking costs.

After data has been stored in memory 75, the user may activate portable computing device 10 and use main processor 50 to access the data (e.g., communications) that were

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[illegible][illegible]

Claims:

1. A portable computing system comprising:

a modem adapted to receive a communication;

a processor coupled to the modem; and

5 a non-volatile memory device coupled to the modem and the processor, wherein the modem is adapted to store at least a portion of the communication in the non-volatile memory when the processor is inactive.

10 2. The portable computing system of claim 1, further comprising a hard drive coupled to the processor.

15 3. The portable computing system of claim 1, further comprising a modem processor, wherein the modem processor is adapted to operate independently of the processor.

4. The portable computing system of claim 3, wherein the modem processor is adapted to store at least a portion of the communication in the non-volatile memory when the processor is powered off.

20 5. The portable computing system of claim 1, wherein the modem is adapted to transmit a transmitted message when the processor is inactive.

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7. The portable computing system of claim 1, wherein the non-volatile memory is adapted to store user profile information indicative of what communications are to be stored in the non-volatile memory.

[illegible]

8. A method of retrieving data with a portable computing device having a modem, a first processor, and a second processor, the method comprising:

deactivating the first processor of the portable computing device;

activating the second processor so that the modem receives the data; and

storing the data.

9. The method of claim 8, wherein deactivating the first processor includes disabling a power supply so that the first processor consumes substantially no power.

10. The method of claim 8, wherein storing the data includes storing the data in a non-volatile memory.

11. The method of claim 10, wherein storing the data includes transferring the data from the modem to a flash memory array with the second processor.

12. The method of claim 8, further comprising:

activating the first processor; and

accessing the data with the first processor.

13. The method of claim 8, further comprising initializing the second processor to identify the data to be stored.

14. The method of claim 13, wherein initializing the second processor includes

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17. The method of claim 8, wherein activating the second processor includes enabling the modem to receive a wireless communication comprising at least a portion of the data to be stored.

18. A method of storing data in a portable computing device comprising:

programming a modem to receive data with the modem while a main processor of the portable computing device is disabled.

5 19. The method of claim 18, further comprising storing the data in a non-volatile memory device.

20. The method of claim 18, wherein receiving data with the modem includes receiving a wireless communication.

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Abstract

[illegible]

**DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION
(FOR INTEL CORPORATION PATENT APPLICATIONS)**

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below, next to my name.

I believe I am the original, first, and sole inventor (if only one name is listed below) or an original, first, and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

MOBILE COMPUTING SYSTEM HAVING A MODEM AND METHOD THEREFOR

the specification of which

☒ is attached hereto.
☐ was filed on _____ as _____
 United States Application Number _____
 or PCT International Application Number _____
 and was amended on _____
 (if applicable)

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claim(s), as amended by any amendment referred to above. I do not know and do not believe that the claimed invention was ever known or used in the United States of America before my invention thereof, or patented or described in any printed publication in any country before my invention thereof or more than one year prior to this application, that the same was not in public use or on sale in the United States of America more than one year prior to this application, and that the invention has not been patented or made the subject of an inventor's certificate issued before the date of this application in any country foreign to the United States of America on an application filed by me or my legal representatives or assigns more than twelve months (for a utility patent application) or six months (for a design patent application) prior to this application.

I acknowledge the duty to disclose all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119(a)-(d), of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s):

APPLICATION NUMBER	COUNTRY (OR INDICATE IF PCT)	DATE OF FILING (day, month, year)	PRIORITY CLAIMED UNDER 37 USC 119
			<input type="checkbox"/> No <input type="checkbox"/> Yes
			<input type="checkbox"/> No <input type="checkbox"/> Yes
			<input type="checkbox"/> No <input type="checkbox"/> Yes

I hereby claim the benefit under Title 35, United States Code, Section 119(e) of any United States provisional application(s) listed below:

APPLICATION NUMBER	FILING DATE

I hereby claim the benefit under 35 U.S.C. § 120 of any United States Application(s), or § 365(c) of any PCT International Application designating the United States, listed below and, insofar as the subject matter of each of the Claims of this Application is not disclosed in the prior United States or PCT International Application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 C.F.R. § 1.56 which became available between the filing date of the prior Application and the national or PCT international filing date of this Application:

<u>NONE</u>		
Application Number	Filing Date	Status

I hereby appoint the following attorney(s) and/or agent(s) to prosecute this Application and transact all business in the Patent and Trademark Office connected therewith.

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APPENDIX A

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